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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,987	08/18/2006	Yoshimi Kawashima	294571US0PCT	2471

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

ZIMMER, ANTHONY J

ART UNIT	PAPER NUMBER
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1793

NOTIFICATION DATE	DELIVERY MODE
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06/05/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/589,987	Applicant(s) KAWASHIMA ET AL.	
	Examiner ANTHONY J. ZIMMER	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-22, 24-30 and 32-40 is/are pending in the application.
- 4a) Of the above claim(s) 20, 21, 24-30, 33, 34 and 36-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19, 22, 32, and 39-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 19 is objected to because of the following informalities: A semicolon should be inserted after "zirconium oxide" in the third line of the claim to clearly separate the Markush group from component (b). Semicolons should also be inserted between the remaining components (b), (c), and (d). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19, 22, 32, and 39-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure as originally filed does not support the claimed range of components (b) and (c) present in an amount of 72-98.9 mass %.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claim 19, 22, 32, and 39-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites, "components (b) and (c) are present in the carrier in an amount of 72-98.9 mass %." It is indefinite whether or not this refers to their combined mass or if each is an amount in the recited range. For examination purposes, the claim will be interpreted as requiring the combined amount to be in the range of the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 19 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jang et al. in view of the journal article by Sekizawa et al.

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In regard to claims 19 and 32, Jang teaches a catalyst comprising lanthanum oxide, manganese oxide, strontium oxide (See Section 2.1), teaches that these catalysts prepared with NH_4OH contain aluminum oxide in alumina form (See section 3.1), and teaches supporting 2 wt.% platinum (Section 2.1). Jang teaches a ratio of elements of $\text{Sr}_{1-x}\text{La}_x\text{MnAl}_{11}\text{O}_{19-\alpha}$, wherein $x = 0, 0.4, \text{ and } 1$ (see Section 2.1). Thus when $x=0.4$ with 2 wt. % palladium the lanthanum oxide component is ~12 wt.% and the oxide components of manganese and aluminum are ~75 wt/ %.

Jang does not teach the palladium in reduced form.

However, Sekizawa teaches using a similar catalyst in the same regard as Jang (methane oxidation), and previous to use Sekizawa teaches reducing with hydrogen. See second paragraph in the right-hand column of Sekizawa. Thus, it would have been obvious to one of ordinary skill in the art to reduce the palladium of Jang in order to affect the predictable result of catalytically oxidizing methane.

Allowable Subject Matter

Claims 22, and 39-40 are allowable over the cited prior art of record.

In regard to claim 22, the closest prior art, Jang et al., does not teach or suggest the structure implied by the product process steps recited in the claim, i.e. Jang does not teach an impregnated alumina carrier and instead teaches a composite metal oxide containing alumina.

In regard to claims 39-40, Jang does not teach or suggest a catalyst consisting of components (a), (b), (c), and (d) or a carrier consisting of components (a), (b), and (c)

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with an amount of component (a) in the range presented in claim 19 (1-20 wt. %). Jang teaches a ratio of elements of $\text{Sr}_{1-x}\text{La}_x\text{MnAl}_{11}\text{O}_{19-\alpha}$, wherein $x = 0, 0.4$, and 1 (see Section 2.1). However, when $x=1$ (when the carrier consists of components (a), (b), and (c)), component (a) is present in an amount of ~28 wt. %.

Response to Arguments

Applicant's arguments filed 2/12/2009 in regard to the rejection of claims 19 and 32 over Jang have been fully considered but they are not persuasive.

Applicant argues that Jang fails to disclose a catalyst containing components (a)-(c) in combination with a noble metal as recited in the present claims. However, this argument is moot in view of the new grounds of rejection presented above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. ZIMMER whose telephone number is (571)270-3591. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ajz

/Steven Bos/
Primary Examiner, Art Unit 1793